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Remarks

This amendment is responsive to the Office Action of April 7, 2006. Re-examination and reconsideration of claims 1-27 is respectfully requested.

Claim 11 has been amended to recite "where the at least first communication protocol does not provide notice of an access to the second communication protocol". Further, claim 20 has been amended to recite "where at least one of the communication protocols does not provide notice of an access to the other protocols". No new matter has been introduced by these amendments. Support can be found, for example, at paragraph [0016].

Applicants' representative respectfully notes an apparent inconsistency exists with respect to the HP color LaserJet User Guide identified in the Office Action. The Notice of References attached to the Office Action cited identifies "The HP Color LaserJet 4500 Printer; 2002" (emphasis added), while the Office Action itself identifies "HP color Laser Jet 4600 User Guide (First edition: April 2002; Part Number: C9660-90912)". (Office Action, page 4, emphasis added). Additionally, included with the Office Action were pages 15-24 and 169-174 from a reference "the HP Color LaserJet 4500 Printer" having a handwritten mark "I" along with pages 47-60, 211-219 and 221-224 from a reference "Part number: C9660-90912" having a handwritten mark "IP". The second group of pages appear to be copied from the HP color LaserJet 4600 series printer User's Guide. For purposes of clarity, the first group of pages will be referred to herein as "the HP LaserJet 4500 Printer reference" and the second group of pages will be referred to herein as "the HP LaserJet 4600 Printer reference".

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Summary of The Office Action

Claim 11-19 were rejected under 35 U.S.C. §101.

Claims 2-3, 14 and 22 were rejected under 35 U.S.C. §112 as failing to comply with the enablement requirement.

Claims 1-27 were rejected under 35 U.S.C. §102(b), as being anticipated by HP color Laser Jet 4600 User Guide (First edition: April 2002; Part Number C9660-90912).

Claims 1-27 were rejected under 35 USC §102(e) as being anticipated by McIntyre (2003/0063305).

Claims 1-3, 5-12, 14-20 and 22-27 were rejected under 35 USC §102(e) as being anticipated by Arakawa (2002/0054339).

Claims 4, 13, and 21 were rejected under 35 USC §103(a) as being unpatentable over Arakawa (2002/0054339) as applied to claims 1, 11 and 20 above, and further in view of Erlington (2003/0233544).

The Claims Describe Statutory Subject Matter

Claims 11-19 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Claim 11 recites "an article of manufacture embodied in a computer-readable medium". The Office Action notes that "on page 2 of the specification a computer-readable medium is defined as 'signals and carrier wave/pulse'". (Office Action, page 3). The Office Action provides "[t]he rejection of claim 11 under 35 USC 101 still holds because instructions/code are the data embodied in computer readable storage medium as required and pointed out in Beauregard and Lowry not 'the article of manufacture' described in the specification (page 2 of the specification a computer-readable medium is defined as 'signals and carrier wave/pulse')".

The Examiner is again requested to provide authority for this rejection. Contrary to the Office Action assertion, the 1996 PTO Examination Guidelines For Computer-Related

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Inventions (1996 Guidelines) as controlled by Federal Circuit case law reveal that carrier waves are statutory subject matter. Therefore this rejection is baseless and should be withdrawn.

Furthermore, the rejection is conclusory. No substantive law and no analysis of claim limitations were provided to establish a proper §101 rejection. The rejection thus cannot stand.

Applicant assumes that the basis for the rejection may stem from the Interim Guidelines for Subject Matter Eligibility dated 22 November 2005. If this is the case, Applicant notes that the U.S. Patent Office has stated that the Interim Guidelines are not law. The U.S. Patent and Trademark Federal Register/Vol. 70, No. 243/Dec. 20, 2005/Notices under the "Request for Comments on the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" in the third column, lines 57-66 state:

"The Patent Subject Matter Eligibility Interim Guidelines do not constitute substantive rule making and hence do not have the force and effect of law....Rejections will be based upon the substantive law..." [Emphasis Added]

As such, simply citing to the Interim Guidelines does not satisfy the obligations and requirements for establishing a proper §101 rejection. There must be some articulated reasoning with some rational underpinning to support the legal conclusion. No substantive law has been cited and no rationale has been articulated to support the rejection. The rejection thus cannot stand and should be withdrawn.

Furthermore, as a direct result of *Lowry* and *Beauregard*, the PTO provided the 1996 Guidelines to examiners and practitioners alike. The 1996 Guidelines (as recited in MPEP §2106) provide guidance for how to examine computer-readable medium claims. For example, MPEP §2106 distinguishes proper 35 U.S.C. §101 rejections (e.g., to claims directed to forms of energy) from improper 35 U.S.C. §101 rejections (e.g., to claims to signals functioning as computer-readable medium).

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MPEP §2106 (IV)(B)(1)(a) reads:

A claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. (emphasis added)

In this application, the rejected claims concern a computer-readable medium comprising processor executable instructions (e.g. a program), and is thus statutory.

MPEP §2106 (IV)(B)(1)(c) reads:

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, *per se*, and as such are non-statutory natural phenomena. *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 112-14 (1853).

In this application, the rejected claims recite more than just the physical characteristic of energy. They recite processor executable instructions that cause a processor to act, function, and/or operate in a specific manner. It has been judicially recognized that such instructions transform a device from a general purpose machine to a special purpose machine, which has long been recognized as statutory subject matter.

MPEP §2106 (IV)(B)(1)(c) also reads:

A signal claim directed to a practical application of electromagnetic energy is statutory regardless of its transitory nature. See *O'Reilly*, 56 U.S. at 114-19; *In re Breslow*, 616 F.2d 516, 519-21, 205 USPQ 221, 225-26 (CCPA 1980). (emphasis added).

In this application, the rejected claims concern processor executable instructions that cause a processor to act, function, and/or operate in a specific manner. This is a practical

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application regardless of the form of the instructions. Thus, following MPEP §2106(IV)(B)(1), the claims are statutory and this rejection should be withdrawn.

The 1996 Guidelines were supplemented with the 1996 PTO Training Materials Related To Examining Computer-Related Inventions (1996 Training Materials). The 1996 Training Materials discuss, with approval, the following claim in US patent 5,568,202 (Koo).

An electronic reference signal in a system for minimizing the effects of ghosts occurring during the transmission and reception of a television signal over a communications path, **wherein said reference signal is embodied in a processor readable memory**, is non-cyclic, has a substantially flat frequency response within the bandwidth of said communications path and has a plurality of substantially uniform amplitude peaks over a time interval, and wherein a replica of said reference signal is transmitted as part of said television signal and is utilized by a decoder to derive coefficients which are used with at least one filter to remove said ghosts.

Thus, since at least 1996, carrier wave claims have been regarded favorably by the PTO and have been deemed to be statutory subject matter. The PTO is simply following the law as established by the Federal Circuit in *Beauregard* and *Lowry*. The Examiner is invited to follow Federal Circuit case law as directed by the MPEP and thus to withdraw this rejection.

The Claims Are Enabled

Claims 2-3, 14 and 22 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Office Action provides:

The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims recite a sector-level protocol. However the specification does not fully describe a sector-level protocol in such a way that would enable one of ordinary skill in the art to implement the same. As such, the broadest reasonable interpretation is in view.

(Office Action, page 3, emphasis added).

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Firstly, Applicant respectfully points attention to paragraph [0022] of the present specification that describes an example for the phrase "sector-level protocol" as: "the USB protocol 215 is a sector-level communication protocol that can access data on the storage device 205 by sectors." See also, paragraph [0001]. Applicant respectfully submits one of ordinary skill in the art understands what is a USB protocol and understands how to implement a USB protocol. This alone satisfies the enablement requirement. Thus, the phrase "sector-level protocol" is enabled and refers to a communication protocol that can access data on a storage device by sectors. Therefore, the non-enabling rejection should be withdrawn.

Furthermore, the Office Action incorrectly applies the test of enablement. The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation. United States v. Teletronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988). A patent need not teach, and preferably omits, what is well known in the art. In re Buchner, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991).

In view of this test, MPEP §2164.04 provides guidelines for the Examiner with respect to, issuance of a rejection for lack of enablement:

In order to make a rejection, the examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. In re Wright, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993) (examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure). A specification disclosure which contains a teaching of the manner and process of making and using an invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as being in compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, unless there is a reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support.

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References should be supplied if possible to support a prima facie case of lack of enablement, but are not always required. In re Marzocchi, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). However, specific technical reasons are always required.

(MPEP §2164.04, emphasis added).

With respect to the subject application, claim 2 recites “wherein the storage access manager is configured to coordinate simultaneous access to the storage device from a sector-level protocol and a file-level communication protocol.” Claim 3 depends from claim 2 and further recites “wherein the sector-level communication protocol includes a universal serial bus protocol and the file level communication protocol includes a common internet file system protocol.” Next, claim 14 recites “wherein the contention logic is configured based on the first communication protocol being a sector-level protocol and the second communication protocol being a file-level protocol.” Finally, claim 22 recites “the provide access step including providing access based on a sector-level communication protocol and a file-level-communication protocol.”

Support for the phrase “sector-level protocol” can be found, for example, at paragraph [0022]: “the USB protocol 215 is a sector-level communication protocol that can access data on the storage device 205 by sectors.” See also, paragraph [0001]. Furthermore, Applicants’ representative respectfully submits that the phrase “sector-level protocol” is understood by those of ordinary skill in the art to refer to a communication protocol that can access data on a storage device by sectors.

The Office Action provides “the specification does not fully describe a sector-level protocol in such a way that would enable one of ordinary skill in the art to implement same.” (Office Action, page 3). Applicants’ representative respectfully submits that no claim is directed to implementation of a novel sector-level protocol.

The claims at issue are directed to an image forming device (claims 2 and 3), an article of manufacture (claim 14) and a method of provide access to a storage device within an image

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forming device (claim 22). Applicants' representative respectfully submits that based on the information provided in the specification and drawings, one skilled in the art would be able to practice the claimed invention without undue experimentation. Further, the Office Action does not provide any specific technical reasons in support of the lack of enablement rejection as required by MPEP §2164.04. Accordingly, applicants' representative respectfully requests that the rejection of claims 2, 3, 14 and 22 under 35 U.S.C. §112, first paragraph be withdrawn.

The Claims Patentably Distinguish Over the References of Record

Independent Claim 1

Claim 1 recites a storage access manager configured to coordinate access to the storage device from a plurality of client devices that communicate with a storage device using at least one uncoordinating communication protocol. The specification of the subject application provides an example as "uncoordinating communication protocols include protocols from different devices that may compete for access to the storage device 105 where at least one protocol does not provide notice of the access to the other protocol or device". (Paragraph [0016]). The HP LaserJet 4500 Printer reference, the HP LaserJet 4600 Printer reference, McIntyre and Arakawa fail to teach or suggest this feature and thus claim 1 patentably distinguishes over the references of record.

The HP LaserJet 4500 Printer reference teaches a color printer having a bidirectional parallel port, two enhanced Input/Output (EIO) slots, and an EIO network card. (HP LaserJet 4500 reference, pages 16-17). The printer can be configured for network connectivity via Ethernet, Local Talk, Token Ring and/or Fast Ethernet. (HP LaserJet 4500, page 23). The printer is based on HP JetSend technology which enables flexible, direct communications between network devices. (HP LaserJet 4500 reference, page 24). The HP LaserJet 4500 Printer reference does not teach or suggest a storage access manager configured to coordinate access to a storage device from a plurality of client devices that communicate with a storage device using at least one uncoordinating communication protocol.

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Next, the HP LaserJet 4600 Printer reference teaches a color printer that supports network and parallel connections at the same time. (HP LaserJet 4600 Printer reference, page 53). The printer is further equipped with three EIO slots that hold compatible external devices. (HP LaserJet 4600 Printer reference, page 54). HP Jetdirect print servers (network cards) can be installed in one of the printer's EIO slots. (HP LaserJet 4600 Printer reference, page 54). These cards support multiple network protocols and operating systems. (HP LaserJet 4600 Printer reference, page 54).

The Office Action indicates that pages 47-52 of the HP LaserJet 4600 Printer reference teaches the storage access manager limitation of claim 1. However, in reviewing the pages relied upon, network configuration of the printer, and more specifically, configuration of certain network parameters is taught. Applicant respectfully submits that coordination of access to a storage device from a plurality of client devices that communicate with the storage device using at least one uncoordinating communication protocol is not taught or suggested by the HP LaserJet 4600 Printer reference. Since this reference fails to teach or suggest each and every limitation of claim 1, the §102 rejection is not supported and must be withdrawn.

McIntyre

McIntyre teaches a document production system for setting, controlling, querying and saving printer control settings. (McIntyre, Abstract). The document production system 100 includes a printer control program 150 resident on, or accessible to, a computer 110, or computing device. (McIntyre, paragraph [0021]). One or more printers 120, or printing devices, may be in operable communication with the computer 110. (McIntyre, paragraph [0021]). The printers 120 may be controlled by the printer control program 150 using computer 110. (McIntyre, paragraph [0021]). McIntyre explains that printers 120 communicate with computer 110 and other computing devices using serial cables, parallel cables, SCSI ports, USB ports, IR ports, or other suitable wired or wireless communication technologies. (McIntyre, paragraph [0023]). Individual printers 120 may be connected, or accessible to, a single computing device, or multiple computing devices, which make up the network system. (McIntyre, paragraph [0023]).

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The Office Action indicates that paragraph [0023] of McIntyre teaches the storage access manager limitation of claim 1. Looking to paragraph [0023], there is no discussion of managing or coordinating access to a storage device. McIntyre only describes different ways to connect a printer to a computer. Thus, McIntyre does not teach or suggest the claimed storage access manager configured to coordinate of access to a storage device from a plurality of client devices that communicate with the storage device using at least one uncoordinating communication protocol. Therefore, McIntyre fails to support the §102(e) rejection and the rejection must be withdrawn.

Arakawa

Finally, Arakawa teaches an image processing system comprising a digital color copier 1000, an image server 200 as a server device connected on a network and computers 400 as information processing apparatuses which are used by client users. (Arakawa, Fig. 1 and paragraph [0033]). The Office Action indicates that Figs. 1 and 5 along with paragraphs [0060]-[0065] of Arakawa teach the storage access manager limitation of claim 1. Fig. 5 is a block diagram for explaining the construction of the server device which corresponds to the construction of the image server 200. (Arakawa, paragraph [0060]). The image server 200 includes a network controller 220 that serves to control protocol processing on the network 1. (Arakawa, paragraph [0062]).

However, Arakawa fails to mention anything related to coordinating access to a storage device as claimed. Thus, Applicants' representative respectfully submits that Arakawa does not teach or suggest coordination of access to a storage device from a plurality of client devices that communicate with the storage device using at least one uncoordinating communication protocol. Therefore, Arakawa fails to support the §102 rejection and the rejection must be withdrawn.

Dependent claim 2 recites the further limitation of "wherein the storage access manager is configured to coordinate simultaneous access to the storage device from a sector-level communication protocol and a file-level communication protocol." Applicants' representative

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respectfully submits that the HP LaserJet 4500 Printer reference, the HP LaserJet 4600 Printer reference, McIntyre and Arakawa fail to teach or suggest a storage access manager configured to coordinate simultaneous access to a storage device from a sector-level communication protocol and a file-level communication protocol. Thus, claim 2 patentably distinguishes over the references of record and is allowable for this additional reason.

Dependent claim 4 recites the further limitation of "wherein the storage access manager further includes a contention matrix configured to determine contention states for accessing the storage device". The HP LaserJet 4500 Printer reference, the HP LaserJet 4600 Printer reference, McIntyre and Arakawa fail to teach or suggest a storage access manager that includes a contention matrix configured to determine contention states for accessing a storage device. Thus, claim 4 patentably distinguishes over the references of record and is allowable for this additional reason.

The HP LaserJet 4500 Printer reference, the HP LaserJet 4600 Printer reference, McIntyre and Arakawa fail to teach or suggest a storage access manager configured to coordinate access to a storage device from a plurality of client devices that communicate with a storage device using at least one uncoordinating communication protocol as recited in claim 1. Since claim 1 recites features not disclosed or suggested by the references, claim 1 patentably distinguishes over the references of record and is now in condition for allowance. Additionally, dependent claims 2-10 also patentably distinguish over the references and are in condition for allowance.

Independent Claim 11

Claim 11 recites second processor executable instructions for causing a processor to determine a contention status between the current access state and a received access request for accessing the storage device based on a contention logic, the contention logic defining rights for simultaneous access to the storage device from the at least first communication protocol and the second communication protocol where the at least first communication protocol does not provide notice of an access to the second communication protocol, and, third processor executable

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instructions for causing a processor to determine whether the received access request is permissible based on the contention status. (Emphasis added). The HP LaserJet 4500 Printer reference, the HP LaserJet 4600 Printer reference, McIntyre and Arakawa fail to teach or suggest this feature and thus claim 11 patentably distinguishes over the references of record.

The HP LaserJet 4500 Printer reference teaches a color printer that can be configured for network connectivity via Ethernet, Local Talk, Token Ring and/or Fast Ethernet. (HP LaserJet 4500 reference, page 23). The HP LaserJet 4500 Printer reference does not teach or suggest contention logic defining rights for simultaneous access to the storage device from the at least first communication protocol and the second communication protocol where the at least first communication protocol does not provide notice of an access to the second communication protocol.

The HP LaserJet 4600 Printer reference teaches a color printer that supports network and parallel connections at the same time. (HP LaserJet 4600 Printer reference, page 53). HP Jetdirect print servers (network cards) can be installed that support multiple network protocols and operating systems. (HP LaserJet 4600 Printer reference, page 54). However, there is no discussion of contention issues.

The Office Action indicates that pages 50-53 of the HP LaserJet 4600 Printer reference teaches contention logic limitation of claim 11. However, in reviewing the pages relied upon, network configuration of the printer, and support for network and parallel connections at the same time is taught. Contention issues are not mentioned and are not a concern in the reference. Applicants' representative respectfully submits that contention logic defining rights for simultaneous access to the storage device from the at least first communication protocol and the second communication protocol where the at least first communication protocol does not provide notice of an access to the second communication protocol is not taught or suggested by the HP LaserJet 4600 Printer reference. Therefore, the reference fails to support the §102 rejection and the rejection must be withdrawn.

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McIntyre teaches a document production system for setting, controlling, querying and saving printer control settings. (McIntyre, Abstract). The document production system 100 includes a printer control program 150 resident on, or accessible to, a computer 110, or computing device. (McIntyre, paragraph [0021]). One or more printers 120 may be controlled by the printer control program 150 using computer 110. (McIntyre, paragraph [0021]). Individual printers 120 may be connected, or accessible to, a single computing device, or multiple computing devices, which make up the network system. (McIntyre, paragraph [0023]).

The Office Action indicates that paragraph [0034] of McIntyre teaches the contention logic limitation of claim 11. Looking to McIntyre [0034], there is no mention of contention issues or any type of contention logic. Applicants' representative respectfully submits that McIntyre does not teach or suggest contention logic defining rights for simultaneous access to the storage device from the at least first communication protocol and the second communication protocol where the at least first communication protocol does not provide notice of an access to the second communication protocol. Therefore, McIntyre fails to support the §102 rejection and the rejection must be withdrawn.

Finally, Arakawa teaches an image processing system comprising a digital color copier 1000, an image server 200 as a server device connected on a network and computers 400 as information processing apparatuses which are used by client users. (Arakawa, Fig. 1 and paragraph [0033]). The Office Action indicates that Figs. 1 and 5 along with paragraphs [0060]-[0065] of Arakawa teach the storage access manager limitation of claim 1. The image server 200 includes a network controller 220 that serves to control protocol processing on the network 1. (Arakawa, paragraph [0062]). Applicants' representative respectfully submits that Arakawa does not teach or suggest contention logic defining rights for simultaneous access to the storage device from the at least first communication protocol and the second communication protocol where the at least first communication protocol does not provide notice of an access to the second communication protocol. Therefore, Arakawa fails to support the §102 rejection and the rejection must be withdrawn.

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Dependent claim 14 recites the further limitation of “wherein the contention logic configured based on the first communication protocol being a sector-level protocol and the second communication protocol being a file-level protocol.” Applicants’ representative respectfully submits that the HP LaserJet 4500 Printer reference, the HP LaserJet 4600 Printer reference, McIntyre and Arakawa fail to teach or suggest contention logic configured to coordinate simultaneous access to a storage device from a sector-level communication protocol and a file-level communication protocol. Therefore, claim 14 patentably distinguishes over the references of record and is allowable for this additional reason.

The HP LaserJet 4500 Printer reference, the HP LaserJet 4600 Printer reference, McIntyre and Arakawa fail to teach or suggest contention logic defining rights for simultaneous access to the storage device from the at least first communication protocol and the second communication protocol where the at least first communication protocol does not provide notice of an access to the second communication protocol as recited in claim 11. Since claim 11 recites features not disclosed or suggested by the references, claim 11 patentably distinguishes over the references of record and is now in condition for allowance. Accordingly, dependent claims 12-19 also patentably distinguish over the references and are in condition for allowance.

Independent Claim 20

Claim 20 recites providing access to the storage device in accordance with multiple communication protocols where at least one of the communication protocols does not provide notice of an access to the other protocols, and, coordinating multiple access requests to the storage device based on contention rules that define permissibility of simultaneous access requests from the multiple communication protocols. (Emphasis added). The HP LaserJet 4500 Printer reference, the HP LaserJet 4600 Printer reference, McIntyre and Arakawa fail to teach or suggest this feature and thus claim 20 patentably distinguishes over the references of record.

As discussed in greater detail above, the HP LaserJet 4500 Printer reference teaches a color printer that can be configured for network connectivity via Ethernet, Local Talk, Token

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Ring and/or Fast Ethernet. (HP LaserJet 4500 reference, page 23). However, contention issues are not a concern in this references and are not discussed. As such, the HP LaserJet 4500 Printer reference does not teach or suggest providing access to the storage device in accordance with multiple communication protocols where at least one of the communication protocols does not provide notice of an access to the other protocols, and, coordinating multiple access requests to the storage device based on contention rules that define permissibility of simultaneous access requests from the multiple communication protocols. Therefore, this reference fails to support the §102 rejection and the rejection must be withdrawn.

The HP LaserJet 4600 Printer reference teaches a color printer that supports network and parallel connections at the same time. (HP LaserJet 4600 Printer reference, page 53). However, there is no discussion of providing access and coordinating multiple access requests as claimed.

The Office Action indicates that pages 47-52 of the HP LaserJet 4600 Printer reference teaches the providing access and coordinating multiple access requests limitations of claim 20. In reviewing the pages relied upon, network configuration of the printer, and more specifically, configuration of certain network parameters is taught. Applicants' representative respectfully submits that providing access to the storage device in accordance with multiple communication protocols where at least one of the communication protocols does not provide notice of an access to the other protocols, and, coordinating multiple access requests to the storage device based on contention rules that define permissibility of simultaneous access requests from the multiple communication protocols is not taught or suggested by the HP LaserJet 4600 Printer reference. Thus, this reference fails to support the §102 rejection and the rejection must be withdrawn.

McIntyre teaches a document production system for setting, controlling, querying and saving printer control settings. (McIntyre, Abstract). The document production system 100 includes a printer control program 150 resident on, or accessible to, a computer 110, or computing device. (McIntyre, paragraph [0021]). The printers 120 may be controlled by the printer control program 150 using computer 110. (McIntyre, paragraph [0021]). Individual printers 120 may be connected, or accessible to, a single computing device, or multiple computing devices, which make up the network system. (McIntyre, paragraph [0023]).

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The Office Action indicates that paragraphs [0022] and [0033] of McIntyre teaches the providing access and coordinating multiple access requests limitations of claim 20. Applicants' representative respectfully submits that McIntyre does not teach or suggest providing access to the storage device in accordance with multiple communication protocols where at least one of the communication protocols does not provide notice of an access to the other protocols, and, coordinating multiple access requests to the storage device based on contention rules that define permissibility of simultaneous access requests from the multiple communication protocols. Therefore, McIntyre fails to support the §102 rejection and the rejection must be withdrawn.

Arakawa teaches an image processing system. The Office Action indicates that Figs. 1 and 5 along with paragraphs [0060]-[0065] of Arakawa teach providing access and coordinating multiple access requests limitations of claim 20. In Arakawa, an image server 200 includes a network controller 220 that serves to control protocol processing on the network 1. (Arakawa, paragraph [0062]). Applicants' representative respectfully submits that Arakawa does not teach or suggest providing access to the storage device in accordance with multiple communication protocols where at least one of the communication protocols does not provide notice of an access to the other protocols, and, coordinating multiple access requests to the storage device based on contention rules that define permissibility of simultaneous access requests from the multiple communication protocols as recited in claim 20.

Dependent claim 22 recites the further limitation of "the providing access step including providing access based on a sector-level communication protocol and a file-level-communication protocol." Applicants' representative respectfully submits that the HP LaserJet 4500 Printer reference, the HP LaserJet 4600 Printer reference, McIntyre and Arakawa fail to teach or suggest the providing access step including providing access based on a sector-level communication protocol and a file-level-communication protocol. Thus, claim 22 patentably distinguishes over the references of record and is allowable for this additional reason.

The HP LaserJet 4500 Printer reference, the HP LaserJet 4600 Printer reference, McIntyre and Arakawa fail to teach or suggest providing access to the storage device in

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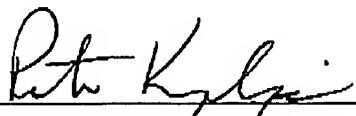
accordance with multiple communication protocols where at least one of the communication protocols does not provide notice of an access to the other protocols, and, coordinating multiple access requests to the storage device based on contention rules that define permissibility of simultaneous access requests from the multiple communication protocols as recited in claim 20. Since claim 20 recites features not disclosed or suggested by the references, claim 20 patentably distinguishes over the references of record and is now in condition for allowance. Additionally, dependent claims 21-27 also patentably distinguish over the references and are in condition for allowance.

Conclusion

For the reasons set forth above, claims 1-27 patentably and unobviously distinguish over the references of record and are now in condition for allowance. An early allowance of all claims is earnestly solicited.

Respectfully submitted,

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